

WHAT IS CLAIMED IS:

1. An antibody selected from the group consisting of anti-EG-VEGF monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.

2. An antibody that binds essentially the same epitope of EG-VEGF bound by an antibody selected from the group consisting of anti-EG-VEGF monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.

3. The antibody of claim 2 which is an antibody fragment.

4. The antibody of claim 3 selected from the group consisting of Fab, Fab', F(ab)₂, and Fv fragments.

5. The antibody of claim 2 which is a chimeric antibody.

6. The antibody of claim 2 which is humanized.

7. The antibody of claim 2 which is human.

8. The antibody of claim 2 which is a bispecific antibody.

9. The antibody of claim 8 wherein said bispecific antibody has binding specificity for VEGF.

10. The antibody of claim 2 which is detectably labeled.

11. A composition of matter comprising (a) an EG-VEGF polypeptide, (b) an agonist of an EG-VEGF polypeptide, or (c) an antagonist of an EG-VEGF polypeptide, in admixture with a pharmaceutically acceptable carrier.

12. The composition of claim 11 wherein said EG-VEGF polypeptide is a native sequence EG-VEGF.

13. The composition of claim 12 wherein said native sequence EG-VEGF is human.

14. The composition of claim 11 wherein said agonist or antagonist is an anti-EG-VEGF-antibody.

15. The composition of claim 14 wherein said antagonist is an anti-EG-VEGF antibody selected from the group consisting of monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.

16. The composition of claim 14 wherein said antagonist is an anti-EG-VEGF antibody that binds essentially the same epitope of EG-VEGF bound by an antibody selected from the group consisting of anti-EG-VEGF monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.

17. The composition of claim 11 wherein said agonist or antagonist is an anti-EG-VEGF antibody fragment.

18. The composition of claim 17 wherein said antibody fragment is selected from the group consisting of Fab, Fab', F(ab)₂, and Fv fragments.

19. The composition of claim 11 wherein said antagonist is an antisense molecule.

20. The composition of claim 11 further comprising a vascular endothelial growth factor (VEGF), or an agonist or antagonist thereof.

21. The composition of claim 20 wherein said VEGF is a native sequence VEGF polypeptide.

22. The composition of claim 21 wherein said native sequence VEGF is human.

23. An article of manufacture, comprising:

a container;

a label on the container; and

a composition comprising an anti-EG-VEGF antibody binding essentially the same epitope as an antibody selected from the group consisting of monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.

24. The article of manufacture of claim 23 comprising an anti-EG-VEGF antibody selected from the group consisting of monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.

25. A method for identifying a compound that modulates a biological activity of EG-VEGF, comprising the steps of:

a) contacting a candidate compound with EG-VEGF; and

b) determining an alteration in said biological activity of EG-VEGF.

26. The method of claim 25 wherein said compound inhibits a biological activity of said EG-VEGF.

27. The method of claim 25 wherein said compound enhances a biological activity of said EG-VEGF.

28. The method of claim 25 wherein said biological activity is the ability to induce phosphorylation of a kinase involved in cell proliferation or survival.

29. The method of claim 28 wherein said kinase is a MAP kinase.

30. The method of claim 29 wherein said MAP kinase is ERK1 or ERK2.

31. The method of claim 25 wherein said biological activity is the ability to induce phosphorylation of Akt or eNOS.

32. The method of claim 25 wherein said biological activity is the ability to stimulate cell proliferation.

33. The method of claim 25 wherein said biological activity is the induction of chemotaxis.

34. The method of claim 25 wherein said biological activity is the induction of angiogenesis.

35. The method of claim 25 wherein said biological activity is the induction of cell differentiation.

36. The method of claim 25 wherein said biological activity is the induction of endothelial cell fenestration.

37. The method of claim 25 wherein said biological activity is the enhancement of endothelial cell survival.

38. The method of claim 25 wherein said candidate compound is contacted with a whole cell or a cell membrane fraction expressing the coding sequence of EG-VEGF.

39. The method of claim 38 wherein said cell is a recombinant host cell engineered to express said EG-VEGF.

40. The method of claim 25 wherein said candidate compound is contacted with an isolated EG-VEGF.

41. The method of claim 40 wherein said EG-VEGF is immobilized on a solid support.

42. A compound identified by the method of claim 25.

43. A method of inducing cell proliferation, comprising contacting said cells with EG-VEGF in an amount effective to induce proliferation of said cells.

44. The method of claim 43 wherein said cells are endothelial cells.

45. The method of claim 44 wherein said endothelial cells are steroidogenic endothelial cells.

46. The method of claim 45 wherein said endothelial cells are cells of a steroidogenic gland.

47. The method of Claim 43 further comprising contacting said cells with VEGF.

48. A method of inducing chemotaxis in cells, comprising contacting said cells with EG-VEGF in an amount effective to induce chemotaxis.

49. The method of claim 48 wherein said cells are endothelial cells.

50. The method of claim 49 wherein said cells are steroidogenic endothelial cells.

51. The method of claim 50 wherein said cells are endothelial cells of a steroidogenic gland.

52. The method of Claim 48 further comprising contacting said cells with VEGF.

53. A method of enhancing cell survival comprising contacting cells with EG-VEGF in an amount effective to enhance cell survival.

54. The method of claim 53 wherein said cells are endothelial cells.

55. The method of claim 54 wherein said cells are steroidogenic endothelial cells.

56. The method of claim 55 wherein said cells are endothelial cells of a steroidogenic gland.

57. The method of claim 53 further comprising contacting said cells with VEGF.

58. A method of inhibiting endothelial cell proliferation, comprising contacting said cells with an EG-VEGF antagonist in an amount effective to inhibit cell proliferation.

59. The method of claim 58 wherein said EG-VEGF antagonist is an anti-EG-VEGF antibody selected from the group consisting of monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.

60. A method of inhibiting chemotaxis in endothelial cells, comprising contacting said cells with an EG-VEGF antagonist in an amount effective to inhibit chemotaxis.

61. The method of claim 60 wherein said EG-VEGF antagonist is an anti-EG-VEGF antibody selected from the group consisting of monoclonal antibodies 1C6, 2A3, 2A8 and 4H9.